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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,146	07/25/2001	Adrien Beaudoin	789-47	9803

7590 02/25/2003

Akerman Senterfitt & Eidson
Post Office Box 3188
West Palm Beach, FL 33402-3188

EXAMINER

WITZ, JEAN C

ART UNIT PAPER NUMBER

1651

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,146

Applicant(s)

BEAUDOIN ET AL.

Examiner

Jean C. Witz

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-12,14-17,19-27,30-33 and 37-51 is/are pending in the application.
- 4a) Of the above claim(s) 26,33,45 and 46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-12,14-17,19-25,27,30-32,37-44 and 47-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6&7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. The original claims did not include claim 2 or claim 3. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

The misnumbered claims 4-51 have not been renumbered. This is due to the fact that the misnumbering of claims was not discovered until after the preliminary amendment filed April 20, 2001 in which original claims 13, 18, 28-29, and 32-33 were been cancelled. As a result, renumbering of the claims would render the file too confusing as to whether cancelled claims should be renumbered along with the need to further renumber the dependency in the dependent claims. Therefore, all claim numbers referred to in this office action represent original claim numbers.

However, as a result, these claims are objected for the reasons set forth above.

It is strongly suggested that in response to this office action, Applicants cancel all pending claims and submit new claims with proper numbering and in proper order to represent the invention starting with claim 52.

Election/Restrictions

Applicant's election of Group I, claims 1, 4-12, 14-17, 19-25, 27, 30-32, 36-44 and 47-51 in Paper No. 9 is acknowledged. Because applicant did not distinctly and

specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 26, 33 and 45-46 are withdrawn from further consideration pursuant to 37 CFR 1.142(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4-12, 14-17, 19-25, 27, 30-32, 36-44, 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over the disclosures of CA 2,155,571, WO 8401715, JP 360035057A and Collin (U.S. 6,055,936) taken as a whole.

The cited claims are drawn to the extraction of lipids from marine and aquatic animals material comprising the extraction of the material in a ketone such as acetone, the separation of liquid and solid phases, the evaporation of the solvent from the liquid phase, the re-extraction of the solid phase in a solvent such as an alcohol, the separation of the liquid and solid phase, the evaporation of the solvent from the second liquid phase and the recovery of the solid phase. The solid phase contains active enzymes.

Each step in this extraction process is well known in the art. Both JP 360035057A and Collin disclose that acetone is a conventional extractant for marine animals for the recovery of lipid pigments containing astaxanthin and canthaxanthin. CA 2,155,571 discloses that lower alcohols such as ethanol are known to extract long chain polyunsaturated fatty acids from marine organisms. Finally, WO 8401715 discloses that after lipid extraction of krill, the remaining solid phase contains active enzymes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to extract known components from marine and aquatic animals with the reasonable expectation of obtaining these components. The motivation to combine steps flows from the desire to maximize the number of different useable components from a single source within a single procedure. Dependent claims reciting specific extraction, separation, and drying parameters represent procedures well known in the art. For example, finely dividing any material to be extracted is well known in order to maximize the surface area of the material to the extracting liquid.

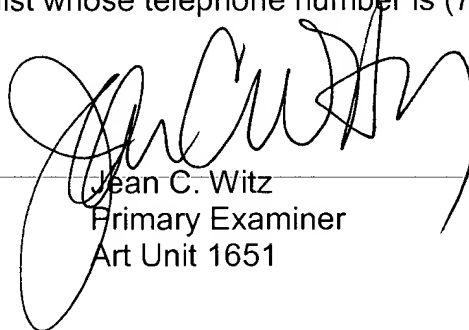
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Further, maintenance of extraction temperatures at or below 5 degrees C is well known and performed in order to reduce oxidation of the fatty acids contained in the material. Drying and separation techniques claimed are well known and conventional in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean C. Witz whose telephone number is (703) 308-3073. The examiner can normally be reached on 6:30 a.m. to 4:00 p.m. M-Th and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on (703) 308-4743. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.



Jean C. Witz
Primary Examiner
Art Unit 1651

February 24, 2003